

KISS-Driven Test Automation

по лезвию бритвы Оккама

Master class

Alexei Vinogradov



Alexei Vinogradov
IT-Консультант



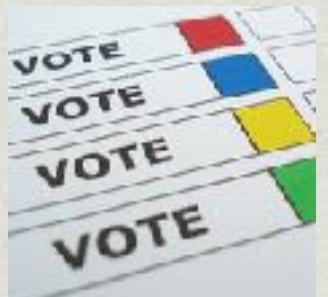
тестирование, управление тестированием,
автоматизация в тестировании, коучинг

В области IT с 1998, докладчик с 2014 года

Студент-практикант -> Программист -> Тестировщик -> ...



<http://radio-qa.com>



DAIMLER



T-Mobile



ebay



..T-Mobile
cisco™



DFS Deutsche Flugsicherung

SoftwareTesters Slack-Chat



<https://software-testers.herokuapp.com>



BEST SHEFFIELD MAKE.
GERMAN HOLLOW GROUND
KROPP RAZOR
ALWAYS READY
FOR USE.
NEVER REQUIRES
GRINDING.

WARRANTED PERFECT

Black Handle	5/6	Kropp Strop Paste	6D.
Ivory Handle	7/6	Kropp Shaving Stick	6D.
A pair Ivory Handle Razors in Russia Leather Case	21/-	Kropp's Badger-hair Shaving Brushes, 5/6, 7/6, 10/6 each	

KROPP "DUPLEX" STROP

MADE OF SPECIALLY PREPARED RUSSIA LEATHER & CANVAS FOR HOLLOW-GROUND RAZOR



WRITE FOR PAMPHLET, "SHAVER'S KIT AND OUTFIT," POST FREE.

Wholesale: OSBORNE, GARRETT & CO., LONDON, W.

Gillette Safety Razor

Gillette

Safety Razor

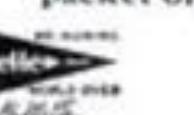
Gift Suggestion!
On Your Christmas List, put *Him* down for a Gillette Safety Razor.

\$5 to \$50
Silver or Gold Plated in Morocco or Pig Skin Cases. Pocket Editions in Fancy Metal Cases—Gold, Silver, Nickel, or Gunmetal, a Great Variety of patterns—Tourists' and Travelers' Sets, with Soap, Brush, and Toilet Articles.

GIVE him a Gillette Safety Razor or Combination set. Buy where the assortment is good and make your selection early.

Your dealer will tell you that as a gift for men the Gillette Safety Razor is now the most popular single specialty in the world.

Gillette Safety Razor Company

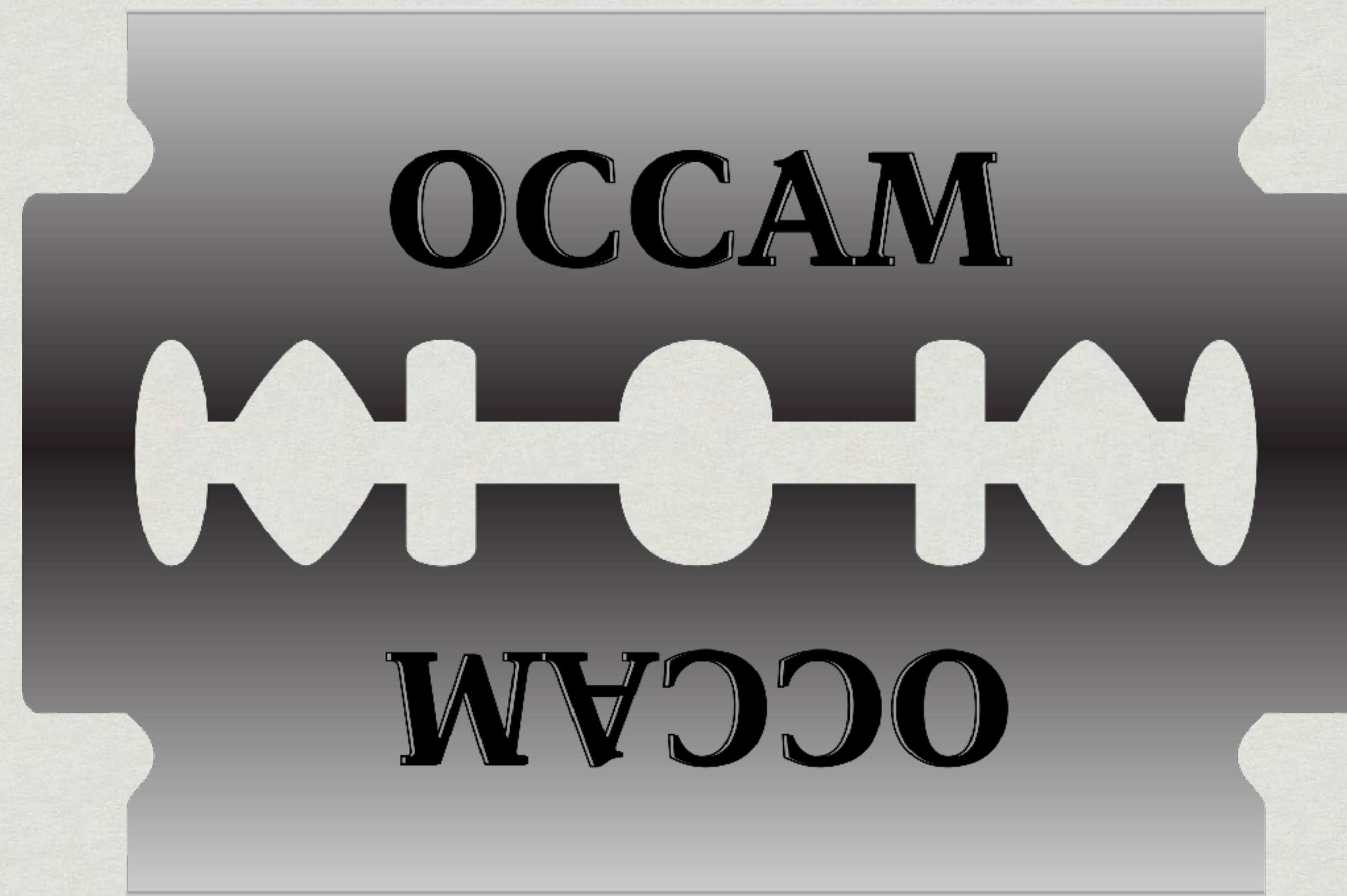


The Gillette is practical—something a man uses every day. He will thank you for the gift and praise the good sense that prompted it.

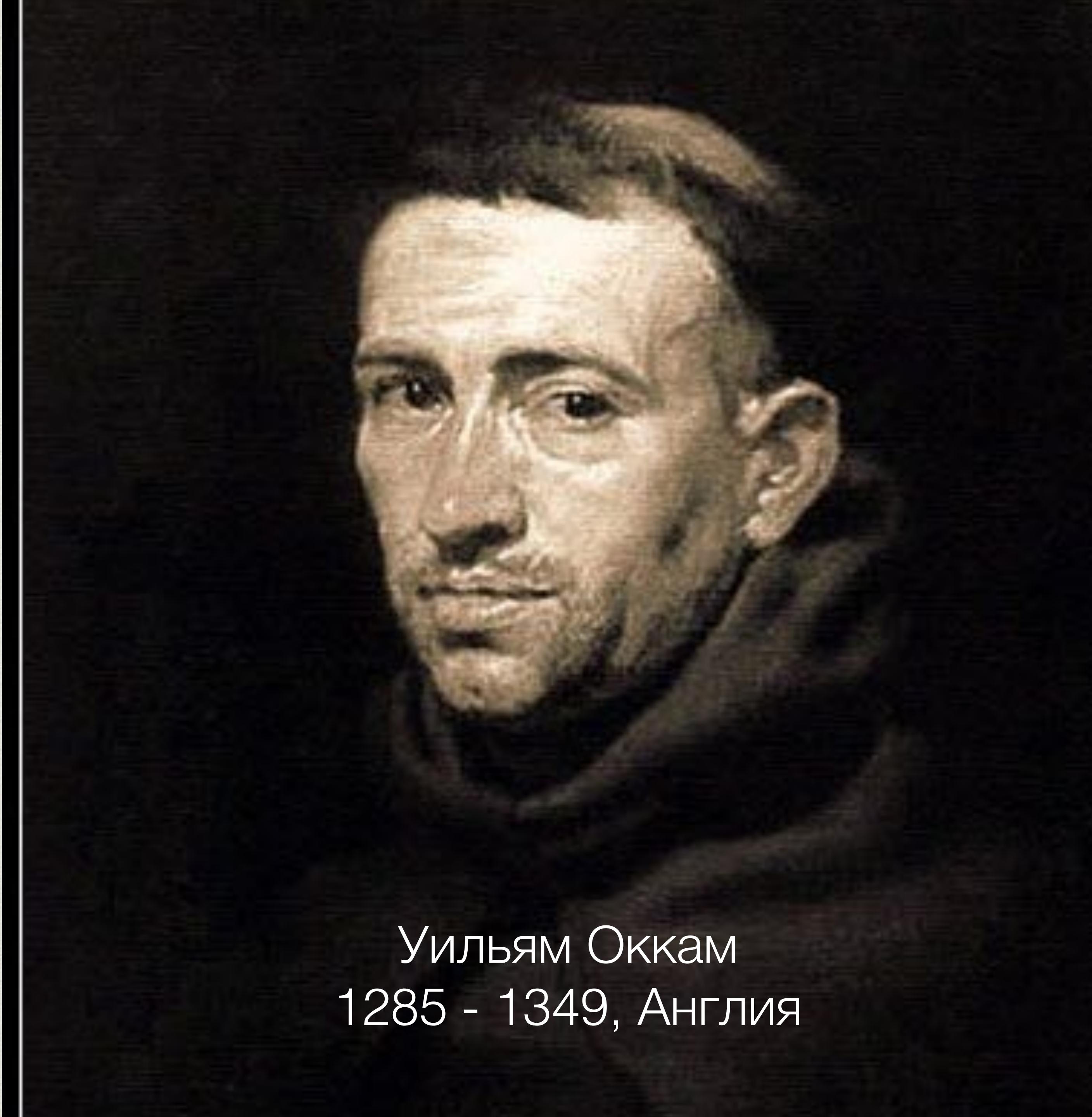
Standard set, \$5.00—Combination and Travelers' sets, \$6 to \$50.

For a small gift there is nothing more acceptable than a packet of Gillette Blades at 50 cents or \$1.00.

24 West Second Street, Boston



The best since the 14. century



Уильям Оккам
1285 - 1349, Англия

"Бритва Оккама"

**Не следует привлекать
новые сущности без крайней
на то необходимости**



Не аксиома, а
предложение

$X \leftarrow A, B, C$

$X \leftarrow A, B, C, D$

«Что может быть сделано на основе меньшего числа
[предположений], не следует делать, исходя из большего»

Лучший код

- это ненаписанный код

KISS-Driven Test Automation (KDTA)





Keep It Simple Stupid



ПРОСТОТА

ЭТО КРУТО!!!

Три принципа KDTA

1. Начинай с KISS
2. Продолжай KISS
3. Отказывайся от KISS только по хорошим причинам

KISS over SOLID



KISS over Design Patterns



KISS over DRY



Make KISS
not over-engineering



Писать простой код сложно



Сложнее всего обходится без
кода совсем





Слайды!



Примеры

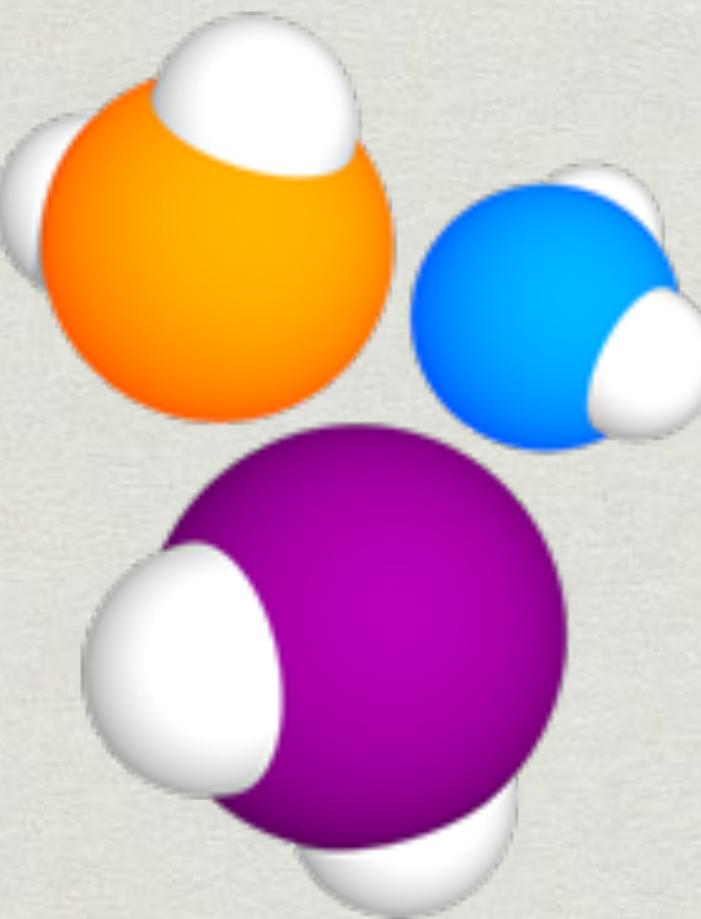
Примеры: UI Test Automation

Не надо писать фреймворки*,
надо писать тесты

*на работе

UI Testing Framework

Selenide
CONCISE UI TESTS IN JAVA



Selenium inside



<http://selenide.org>



Код в GitHub

<https://github.com/vinogradoff/selenide101/>

[https://github.com/vinogradoff/selenide101/tree/
master/src/test/java/de/vinogradoff/kiss_examples](https://github.com/vinogradoff/selenide101/tree/master/src/test/java/de/vinogradoff/kiss_examples)



Типизированные UI элементы

- * Button
- * Link
- * Image
- * Checkbox

HTML Elements

Яндекс

HTML Elements — это Java-фреймворк, который упрощает работу с элементами веб-страниц в ваших тестах.

<epam> | JDI

AUTOMATE THE WAY YOU TEST YOUR APPLICATIONS

JDI is a flexible, easily customizable framework that simplifies website implementation by extending the PageObjects design pattern with a variety of additional UI elements.



Extended PageObjects Pattern
More than 30 UI elements
ready to use



Cross-platform & Cross-
browser
Supports web, mobile, and
desktop testing



Rich Test Run Information
Detailed logs and statistical
reports



Multilanguage
Supports testing in Java
and C#

Class Summary

Class

Button

CheckBox

HtmlElement

Link

Radio

Select

TextInput

TypifiedElement

Text Description;
Button Submit;
Label ProductName;
Link FollowMe;
TextField Password;
TextArea Abuse;
CheckBox RememberMe;
DatePicker Date;
FileInput Upload;
Image Photo;

PageObject

```
public class OtherPageObject{
```

```
    Text description=new Text(By.cssSelector("#text"));
    Button submit=new Button(By.cssSelector("#button"));
    Label productName=new Label(By.cssSelector("#label"));
    Link followMe=new Link(By.cssSelector("#link"));
    TextField passwordField=new TextField(By.cssSelector("#textfield"));
```

```
    public void useElements(){
        description.getText();
        submit.click();
        productName.shouldBe(visible);
        followMe.click();
        passwordField.setValue("password");
    }
}
```

PageObject

```
public class OtherPageObject{  
  
    Text  
    Button  
    Label  
    Link  
    TextField  
  
    description=new Text(By.cssSelector("#text"));  
    // Button(By.cssSelector("#button"));  
    productName=new Label(By.cssSelector("#label"));  
    followMe=new Link(By.cssSelector("#link"));  
    passwordField=new TextField(By.cssSelector("#textfield"));  
}
```



```
public void useElements(){  
    description.getText();  
    submit.click();  
    productName.shouldBe(visible);  
    followMe.click();  
    passwordField.setValue("password");  
}  
}
```

KISS PageObject

```
public class KISSPageObject {  
  
    SelenideElement description=$("#text"),  
    submitBtn=$("#button"),  
    productName=$("#label"),  
    followMe=$("#link"),  
    passwordField=$("#textfield");  
  
    public void useElements(){  
        description.getText();  
        submitBtn.click();  
        productName.shouldBe(visible);  
        followMe.click();  
        passwordField.setValue("password");  
    }  
}
```

getter/setter

Java - Sandbox/src/net/suhrid/Person.java - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help

Debug

Package Exp Type Hierarc JUnit

MyTestCase.java Person.java

```
package net.suhrid;

public class Person {

    private String mFirstName;

    private String mLastName;

    private int mAge;

    public String getmFirstName() {
        return mFirstName;
    }

    public void setmFirstName(String mFirstName) {
        this.mFirstName = mFirstName;
    }

    public String getmLastName() {
        return mLastName;
    }

    public void setmLastName(String mLastName) {
        this.mLastName = mLastName;
    }

    public int getmAge() {
        return mAge;
    }

    public void setmAge(int mAge) {
        this.mAge = mAge;
    }
}
```

Outline

- net.suhrid
- Person
 - mAge : int
 - mFirstName : String
 - mLastName : String
 - getmAge() : int
 - getmFirstName() : String
 - getmLastName() : String
 - setmAge(int) : void
 - setmFirstName(String) : void
 - setmLastName(String) : void

PageObject

```
public class OtherPageObject {  
  
    private SelenideElement productName=$("#label");  
  
    public SelenideElement getProductName() {  
        return productName;  
    }  
  
    private SelenideElement submitBtn=$("#button");  
    private SelenideElement followMe=$("#link");  
  
    public void useElements(){  
        submitBtn.click();  
        followMe.click();  
    }  
}
```

Test

```
public class OtherTest {  
  
    @Test  
    public void testProductName(){  
        new OtherPageObject().getProductName().shouldBe(visible);  
    }  
}
```

PageObject

```
public class OtherPageObject {  
  
    private SelenideElement productName=$("#label");  
  
    public SelenideElement getProductName() {  
        return productName;  
    }  
  
    private SelenideElement submitBtn=$("#button");  
    private SelenideElement followMe=$("#link");  
  
    public void useElements(){  
        submitBtn.click();  
        followMe.click();  
    }  
}
```



KISS PageObject

```
public class KISSPageObject {  
  
    public SelenideElement productName=$("#label");  
  
    private SelenideElement submitBtn=$("#button");  
    private SelenideElement followMe=$("#link");  
  
    public void useElements(){  
        submitBtn.click();  
        followMe.click();  
    }  
}
```

Test

```
public class KISSTest {  
  
    @Test  
    public void testProductName(){  
        new OtherPageObject().productName.shouldBe(visible);  
    }  
}
```

Lombok PageObject

```
public class LombokPageObject {  
  
    @Getter private SelenideElement productName=$("#label"); //Lombok  
  
    private SelenideElement submitBtn=$("#button");  
    private SelenideElement followMe=$("#link");  
  
    public void useElements(){  
        submitBtn.click();  
        followMe.click();  
    }  
}
```

Lombok PageObject



```
public class LombokPageObject {  
  
    @Getter private SelenideElement productName=$("#label"); //Lombok  
  
    private SelenideElement submitBtn=$("#button");  
    private SelenideElement followMe=$("#link");  
  
    public void useElements(){  
        submitBtn.click();  
        followMe.click();  
    }  
}
```

@FindBy & PageFactory

PageObject

```
public class OtherPageObject {  
  
    @FindBy(css = "#text")  
    SelenideElement description;  
    @FindBy(css = "#button")  
    WebElement submit;  
    @FindBy(css = "#label")  
    SelenideElement productName;  
    @FindBy(css = "#link")  
    WebElement followMe;  
  
    public void useElements(){  
        description.getText();  
        submit.click();  
        productName.shouldBe(visible);  
        followMe.click();  
    }  
}
```

PageObject

```
public class OtherPageObject {
```

```
    public OtherPageObject(){  
        PageFactory.initElements(WebDriverRunner.getWebDriver(), OtherPageObject.class);  
    }
```



```
    @FindBy(css = "#text")  
    SelenideElement description;  
    @FindBy(css = "#button")  
    WebElement submit;  
    @FindBy(css = "#label")  
    SelenideElement productName;  
    @FindBy(css = "#link")  
    WebElement followMe;
```

```
    public void useElements(){  
        description.getText();  
        submit.click();  
        productName.shouldBe(visible);  
        followMe.click();  
    }  
}
```

KISS PageObject

```
public class KISSPageObject {  
  
    SelenideElement description=$("#text"),  
    submitBtn=$("#button"),  
    productName=$("#label"),  
    followMe=$("#link");  
  
    public void useElements(){  
        description.getText();  
        submitBtn.click();  
        productName.shouldBe(visible);  
        followMe.click();  
    }  
}
```





Selenium PageObject

```
// will not work, because Selenium doesn't use Lazy WebElement evaluation
public class SeleniumPageObjectNotWorking {
```

```
    WebDriver driver=WebDriverRunner.getWebDriver();
```

```
// search will start immediately during class/object initialization
    WebElement description=driver.findElement(By.cssSelector("#text")),
    submitBtn=driver.findElement(By.cssSelector("#text")),
    productName=driver.findElement(By.cssSelector("#text")),
    followMe=driver.findElement(By.cssSelector("#link"));
```

```
    public void useElements(){
        description.getText();
        submitBtn.click();
        productName.getText();
        followMe.click();
    }
}
```



Selenium PageObject

```
// will work
public class SeleniumPageObjectWorking {

    WebDriver driver=WebDriverRunner.getWebDriver();

    By description=By.cssSelector("#text"),
        submitBtn=By.cssSelector("#button"),
        productName=By.cssSelector("#label"),
        followMe=By.cssSelector("#link");

    public void useElements(){
        driver.findElement(description).getText();
        driver.findElement(submitBtn).click();
        driver.findElement(productName).getText();
        driver.findElement(followMe).click();
    }
}
```

KDTA

KISS-DRIVEN TEST AUTOMATION

Fluent PageObjects

Test

```
public class OtherTest {  
  
    @Test  
    public void testProductName(){  
  
        new OtherSearchPage().search()  
            .showDetails()  
            .productName.shouldBe(visible);  
    }  
}
```

Page Objects

```
public class OtherSearchPage {  
  
    private SelenideElement search =$("#button");  
  
    public OtherDetailsPage search(){  
        search.click();  
        return new OtherDetailsPage();  
    }  
}  
  
public class OtherDetailsPage {  
  
    public SelenideElement productName=$("#label");  
    private SelenideElement details =$("#link");  
  
    public OtherDetailsPage showDetails(){  
        details.click();  
        return this;  
    }  
}
```

Razor

Понятие переходов между "страницами"



Какие "страницы"?

SinglePageApplication (SPA)

Portals with widgets

Бывают исключения!

KISS Page Widgets

```
public class KISSSearchWidget {  
  
    private SelenideElement search =$( "#button" );  
  
    public void search(){  
        search.click();  
    }  
}  
  
public class KISSDetailsWidget {  
  
    public SelenideElement productName=$( "#label" );  
    private SelenideElement details =$( "#link" );  
  
    public void showDetails(){  
        details.click();  
    }  
}
```

KISS Test

```
public class KISSTest {  
  
    @Test  
    public void testProductName(){  
  
        new KISSLSearchWidget().search();  
  
        KISSDetailsWidget kissDetailsWidget = new KISSDetailsWidget();  
        kissDetailsWidget.showDetails();  
        kissDetailsWidget.productName.shouldBe(visible);  
  
        // also okay  
        new KISSDetailsWidget().showDetails();  
        new KISSDetailsWidget().productName.shouldBe(visible);  
    }  
}
```

Test

```
public class PaymentsTest {  
  
    @Test  
    public void testPaymentProcess(){  
  
        new PaymentWizard().confirm()  
            .fillRecipientData()  
            .confirm()  
            .fillAmountData()  
            .confirm()  
            .enterTAN()  
            .confirm();  
    }  
}
```

Inheritance

UI

Checking Account

accountNo: 123456

balance: -156,12 €

details

Saving Account

accountNo: 786312

interest: 2% p.a.

details

Page Objects

```
public class CheckingAccountPage extends BaseBankAccountPage{
```

```
    public SelenideElement balance=$("#balance");
```

```
}
```

```
public class SavingAccountPage extends BaseBankAccountPage{
```

```
    public SelenideElement interestRate=$("#interest");
```

```
}
```

Base Page Object

```
public class BaseBankAccountPage {  
  
    public SelenideElement accountNumber=$("#account");  
    private SelenideElement details =$("#link");  
  
    public void showDetails(){  
        details.click();  
    }  
}
```

Base Account

accountNo: 123456

details

Checking Account

balance: -156,12 €

Saving Account

interest: 2% p.a.



A bit of duplication is better than
a bit of dependency

Rob Pike

(<https://www.youtube.com/watch?v=PAAkCSZUG1c&t=9m28s>)

KISS Page Objects

```
public class KISSCheckingAccountPage {  
  
    public SelenideElement accountNumber=$("#account");  
    public SelenideElement balance=$("#balance");  
    private SelenideElement details =$("#link");  
  
    public void showDetails(){  
        details.click();  
    }  
}  
  
public class KISSSavingAccountPage {  
  
    public SelenideElement accountNumber=$("#account");  
    public SelenideElement interest=$("#interest");  
    private SelenideElement details =$("#link");  
  
    public void showDetails(){  
        details.click();  
    }  
}
```

Inherited Tests

```
public class InheritedTest extends BaseTest{  
  
    @Test  
    public void testSomething(){  
        $("#button").click();  
        $("#text").shouldBe(visible);  
    }  
}
```

Base Test

```
public class BaseTest {  
  
    @Before  
    public void openSite() {  
        open("http://example.com");  
        login("username", "pwd");  
    }  
}
```

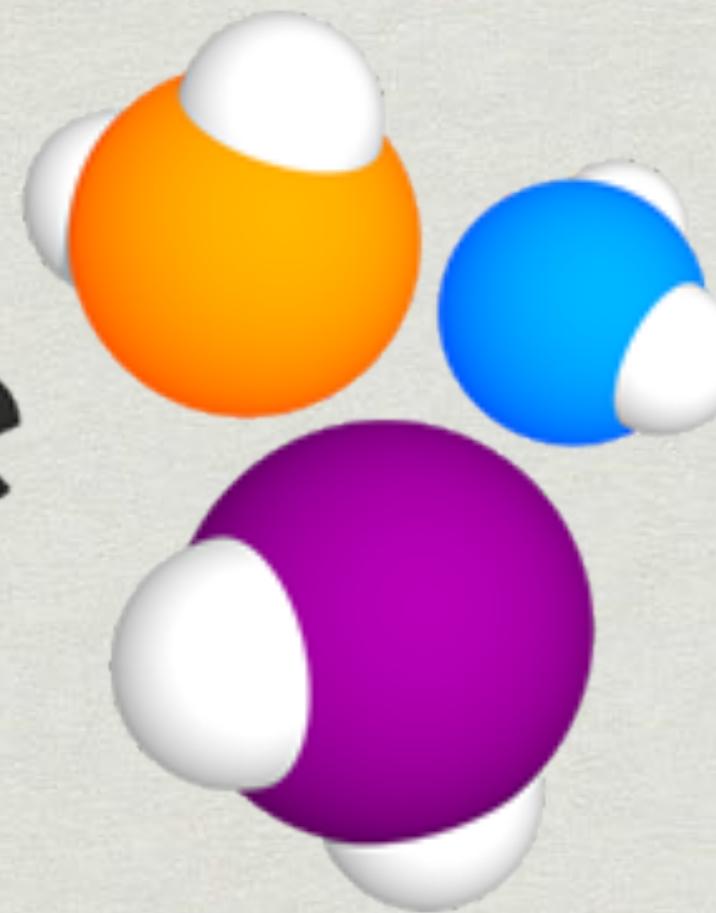
KISS Tests

```
public class KISSTest{  
  
    @Before  
    public void openSite() {  
        open("http://example.com");  
        login("username", "pwd");  
    }  
  
    @Test  
    public void testSomething(){  
        $("#button").click();  
        $("#text").shouldBe(visible);  
    }  
}
```



Good inheritance-free tests possible

Selenide
CONCISE UI TESTS IN JAVA



Composition

Composition over Inheritance

UI

Checking Account

header

accountNo: 123456

balance: -156,12 €

details

footer

Saving Account

header

accountNo: 123456

interest: 3,5% p.a

details

footer

KISS Page Widgets

```
// KISS Widget
public class Header {

    public SelenideElement menu=$("#menu");
    public SelenideElement logo=$("#logo");
}
```

```
// KISS Widget
public class Footer {

    public ElementsCollection links=$$("#links");
    public SelenideElement copyright=$("#copyright");
}
```



Page Object

```
public class CompositionSavingAccountPage {  
  
    public Header header;  
    public Footer footer;  
    public SelenideElement accountNumber=$("#account");  
    public SelenideElement interest=$("#interest");  
    private SelenideElement details =$("#link");  
  
    public void showDetails(){  
        details.click();  
    }  
}
```

Test

```
public class CompositionTest {  
  
    @Test  
    public void testDetails(){  
        new CompositionSavingAccountPage().showDetails();  
        new CompositionSavingAccountPage().accountNumber.shouldHave(text("12345"));  
    }  
  
    @Test  
    public void testFooterAndHeader(){  
        CompositionSavingAccountPage savingAccountPage = new CompositionSavingAccountPage();  
        savingAccountPage.showDetails();  
        savingAccountPage.header.logo.shouldBe(visible);  
        savingAccountPage.footer.links.shouldHaveSize(5);  
    }  
}
```

Page Object

```
public class CompositionSavingAccountPage {  
  
    public Header header;  
    public Footer footer;  
    public SelenideElement accountNumber=$("#account");  
    public SelenideElement interest=$("#interest");  
    private SelenideElement details =$("#link");  
  
    public void showDetails(){  
        details.click();  
    }  
}
```



KISS Page Object Widget

```
public class KISSSavingAccountWidget {  
  
    public SelenideElement accountNumber=$("#account");  
    public SelenideElement interest=$("#interest");  
    private SelenideElement details =$("#link");  
  
    public void showDetails(){  
        details.click();  
    }  
}
```

KISS Tests

```
public class KISSTest {  
  
    @Test  
    public void testDetails(){  
        new KISSLovingAccountWidget().showDetails();  
        new KISSLovingAccountWidget().accountNumber.shouldHave(text("12345"));  
    }  
  
    @Test  
    public void testFooterAndHeader(){  
        new KISSLovingAccountWidget().showDetails();  
        new Header().logo.shouldBe(visible);  
        new Footer().links.shouldHaveSize(5);  
    }  
}
```

[Magic Quadrant: Firewalls - Get the Results of Gartner Firewall Magic Quadrant. Download Now!](#) Ad ...



Alexei Vinogradov
Test Evangelist

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How To Deal With The "I Sent It To My IT Guy"
Response When Following ...
technologymarketingtoolkit.com

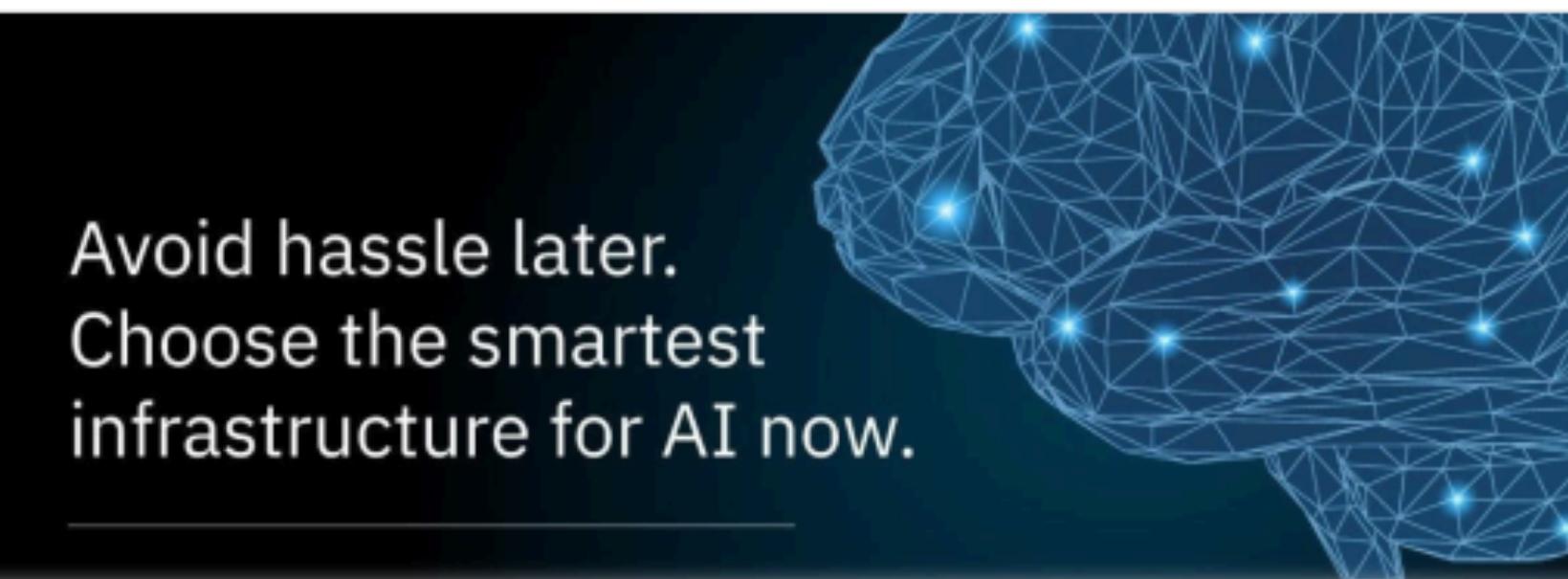
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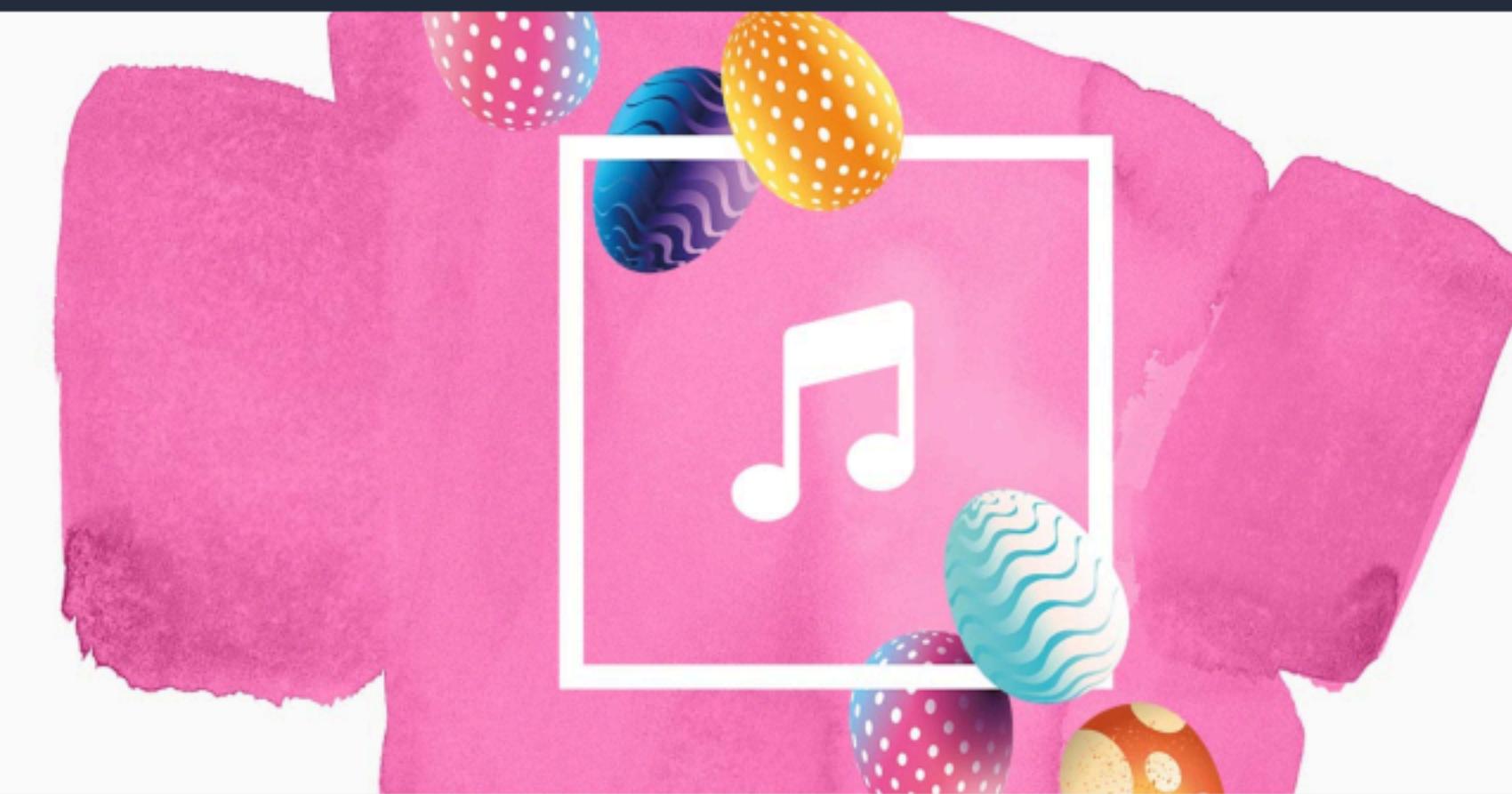
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Hello, Vinograd...
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3 kürzliche Bestellungen

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Elektronik & Foto
Computer & Zubehör
Gewerbe, Industrie & Wissenschaft

PRIME

Gratis Premiumversand:
Schnell, kostenlos & bequem



VIDEO

Empfehlungen für Sie:
Vikings - Staffel 1 [dt./OV]



MUSIK

Amazon Music Unlimited: 40
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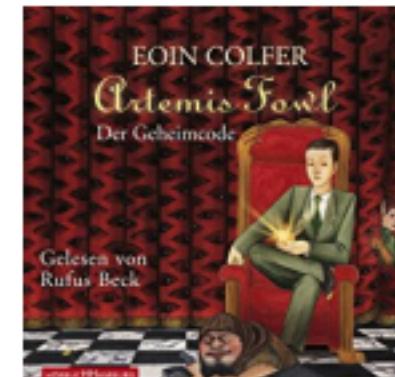
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Einfach fragen.



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Test data and constants

Test

```
public class OtherTest {  
  
    @Test  
    public void testInput(){  
        $("#firstname").setValue("Alexei");  
        $("#lastname").setValue("Vinogradov");  
        $("#submit").click();  
  
        $("#fullname").shouldHave(exactText("Alexei Vinogradov"));  
    }  
  
    @Test  
    public void testSearchField(){  
        $("#search").setValue("Vinogradov");  
        $("#submit").click();  
  
        $("#fullname").shouldHave(exactText("Alexei Vinogradov"));  
    }  
}
```

Test

```
public class OtherTest {
```

```
    public static final String FIRSTNAME = "Alexei";
    public static final String LASTNAME = "Vinogradov";
```



```
@Test
```

```
public void testInput(){
```

```
    $("#firstname").setValue(FIRSTNAME);
    $("#lastname").setValue(LASTNAME);
    $("#submit").click();
```

```
    $("#fullname").shouldHave(exactText(FIRSTNAME+" "+LASTNAME));
```

```
}
```

```
@Test
```

```
public void testSearchField(){
```

```
    $("#search").setValue(LASTNAME);
    $("#submit").click();
```

```
    $("#fullname").shouldHave(exactText(FIRSTNAME+" "+LASTNAME));
```

```
}
```

```
}
```

KISS Test

```
public class KISSTest {  
  
    @Test  
    public void testInput(){  
        $("#firstname").setValue("Alexei");  
        $("#lastname").setValue("Vinogradov");  
        $("#submit").click();  
  
        $("#fullname").shouldHave(exactText("Alexei Vinogradov"));  
    }  
  
    @Test  
    public void testSearchField(){  
        $("#search").setValue("Vinogradov");  
        $("#submit").click();  
  
        $("#fullname").shouldHave(exactText("Alexei Vinogradov"));  
    }  
}
```



Locators (Single Responsibility)

Page Object

```
public class OtherPageObject {
```

```
    SelenideElement description=Locators.DESCRIPTION,  
    submitBtn=Locators.SUBMIT,  
    productName=Locators.LABEL;
```

```
    public void useElements(){  
        description.getText();  
        submitBtn.click();  
        productName.shouldBe(visible);  
    }  
}
```

```
public class Locators {
```

```
    public final static SelenideElement DESCRIPTION=$("#description");  
    public final static SelenideElement SUBMIT=$("#submit");  
    public final static SelenideElement LABEL=$("#label");
```

```
}
```

Page Object

```
public class OtherPageObject {

    SelenideElement description=Locators.DESCRIPTION,
    submitBtn=Locators.SUBMIT,
    productName=Locators.LABEL;

    public void useElements(){
        description.getText();
        submitBtn.click();
        productName.shouldBe(visible);
    }
}

public class Locators {
    public final static SelenideElement HOMEPAGE_HEADER_DESCRIPTION=$("#description");
    public final static SelenideElement PRODUCTPAGE_SEARCH_SUBMIT=$("#submit");
    public final static SelenideElement ACCOUNTTABLE_COLUMN_PRICE_LABEL=$("#label");
}
```



wat

Page Object

```
public class OtherPageObject {  
  
    SelenideElement description=Locators.DESCRIPTION,  
    submitBtn=Locators.SUBMIT,  
    productName=Locators.LABEL;  
  
    public void useElements(){  
        description.getText();  
        submitBtn.click();  
        productName.shouldBe(visible);  
    }  
}
```

```
public class Locators {  
    public final static SelenideElement DESCRIPTION=$("#description");  
    public final static SelenideElement SUBMIT=$("#submit");  
    public final static SelenideElement LABEL=$("#label");  
}
```



KISS PageObject

```
public class KISSPageObject {  
  
    SelenideElement description=$("#text"),  
    submitBtn=$("#button"),  
    productName=$("#label");  
  
    public void useElements(){  
        description.getText();  
        submitBtn.click();  
        productName.shouldBe(visible);  
    }  
}
```

JavaDoc & Comments

PageObject

```
public class OtherPageObject {  
    SelenideElement element = $( "#element", 1 );  
  
    public SelenideElement findUser( String name, int row ) {  
        <...>  
    }  
}
```

PageObject

```
public class OtherPageObject {  
  
    SelenideElement element=$("#element",1); // there are 3 #element-s, take second  
  
    /**  
     * Finds user in the table row  
     */  
    public SelenideElement findUser(String name, int row){  
        <...>  
    }  
}
```

PageObject

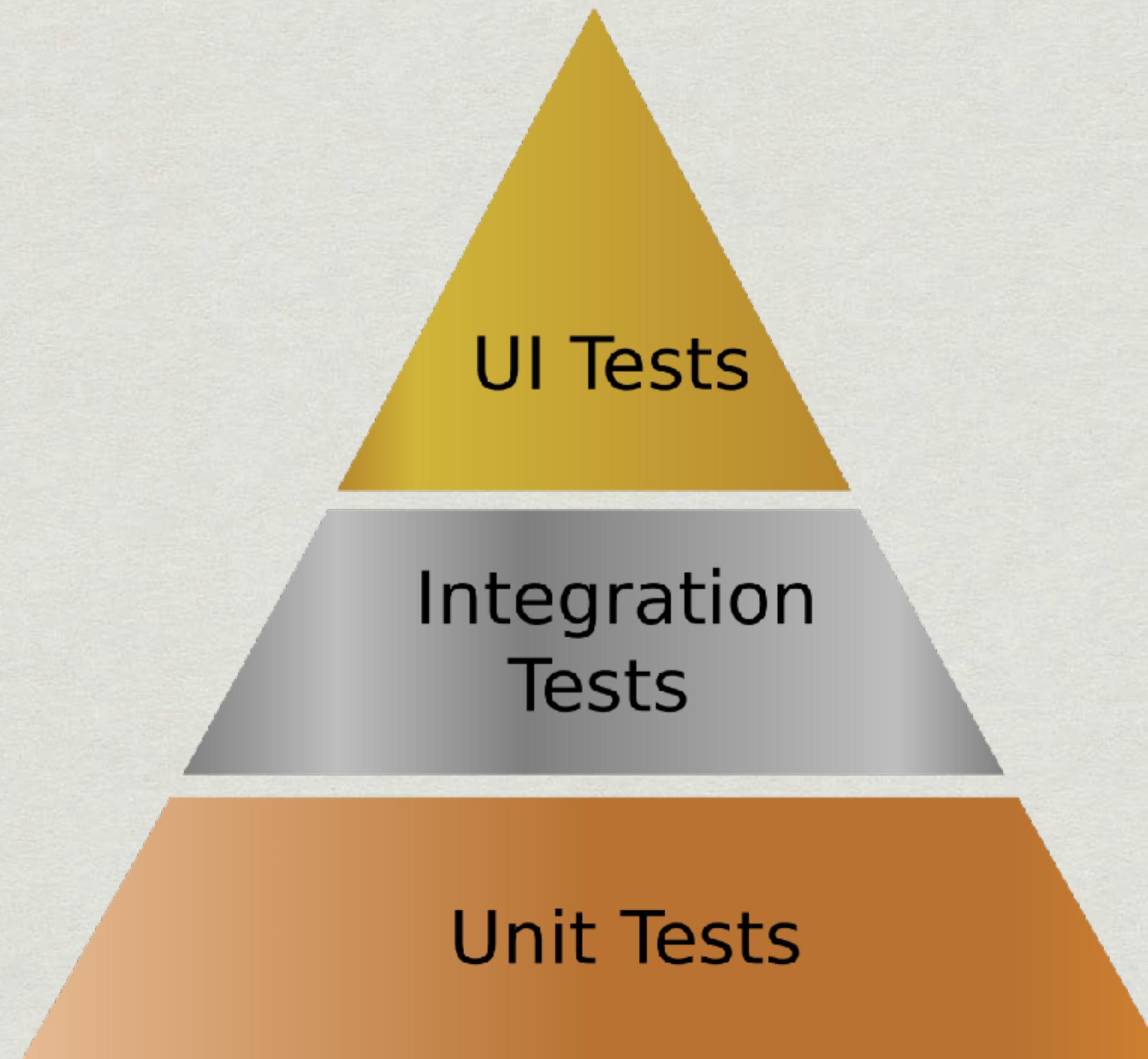
```
public class KISSPageObject {  
  
    SelenideElement element=$("#element",1); // there are 3 #element-s, take second  
  
    /**  
     * Finds user in the table row, substring will be searched  
     * @param name case-sensitive, substring  
     * @param row 0..N  
     * @return SelenideElement representing a table row or null if not found.  
     */  
    public SelenideElement findUser(String name, int row){  
        <...>  
    }  
}
```



PageObject

```
public class KISSPageObject {  
  
    SelenideElement element=$("#element",1); // there are 3 #element-s, take second  
  
    /**  
     * Finds user in the table row, substring will be searched  
     * Examples: findUser("lex",0) - finds Alexei in the first row  
     * findUser("alex",0) - returns null, if Alexei in the first row  
     * @param name case-sensitive, substring  
     * @param row 0..N  
     * @return SelenideElement representing a table row or null if not found.  
    */  
    public SelenideElement findUser(String name, int row){  
        <...>  
    }  
}
```

Стоимость одного теста



ONE FREE SIGN

KISS и сокращение ненужных сущностей
упрощает чтение и поддержку кода

Код становится скучным и простым



ATL

2015



Your clever code
does not impress me

ATL

2015



Your clever code
makes me feel stupid

ATL
2015



Clever code is a symptom
of poor understanding

Простой прямолинейный код
просто и прямолинейно поддерживать





ПРОСТОТА

Не значит, что SOLID, DRY, Design Patterns
плохие!

Не значит, что их никогда не надо
использовать!

KDTA

KISS-DRIVEN TEST AUTOMATION



KDTA

KISS-DRIVEN TEST AUTOMATION

The End. Questions?

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